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28 August 1981

China Report

POLITICAL, SOCIOLOGICAL AND MILITARY AFFAIRS

(FOUO 13/81)

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CHINA REPORT

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MILITARY AND PUBLIC SECURITY

SOLDIERS GIVE VIEWS ON HOW TO IMPROVE TRAINING

Strengthening Tactical Training

Beijing JIEFANGJUN BAO in Chinese 24 Apr 79 p 1

/Article by Dai Huian /2071 1920 1344/ and Chen Shenggeng /7115 3932 1649/: "Three Ideas on the Strengthening of Tactical Training"/

/Text/ When we interviewed the Yunnan border defense forces, cadres and soldiers who took part in fighting told us: The reason our counterattack was carried out so remarkably well is inseparably linked with our staff peacetime training. However, actual combat also exposed some problems that had already shown up in peacetime training exercises; conspicuous among these were problems connected with tactical training. They raised three points which in their opinion should be improved with regard to tactical training, namely:

1. Tactical training must start out from the realities. Its content and key points must be determined with reference to the training outline and according to the nature of the prospective enemy, area of combat and the combat tasks that the unit is charged with. Higher authorities must not centralize control too rigidly, and the lower levels must not merely engage in mechanically copying what had been said or written. The troops stationed in the south must particularly be trained to cope with the special features of terrain and weather in the subtropical mountainous jungles. They must study offensive and defensive fighting in mountainous regions, ambush and counterambush, contact battle, scouting, wiping out enemy pockets and other such tactics so that the soldiers will acquire the skills to fight in every kind of terrain, faced with visible pillboxes and hidden bunkers, "cat caves" trenches, shelters, tunnels and natural caves.

2. Major efforts must be devoted to studying the special characteristics of the enemy's combat methods. In the past our studies of the establishment, equipment and special combat tactics of the enemy were inadequate. During the actual fighting we found out that the Vietnamese army used four special tactics: resist, run, hide, change. That means, at the start, resist the attack; when unable to resist any longer, run (break up into small groups); when unable to escape, hide (in dense forests or caves); when unable to hide, change (into civilian clothes). Faced with these special practices, we were clever enough to change our tactics and finally had the initiative in our hands. Everybody agreed that in future training we must make an effort to study the enemy forces and thus evolve tactics that will lead to victory.

3. We strongly emphasize that the level of tactical thinking among lower level officers must be raised. The main problem with grassroots cadres is that they lack flexibility and have little capability for combat organization, especially in directing operations in situations when troops are widely dispersed. They also lack some basic knowledge for commanding troops (such as map reading, use of maps, etc). At the early stage of an engagement, some officers lacked the ability to make rapid and clever use of their troops, their firepower, the increased variety of weapons, or failed to exploit the effects of bombardments for a charge against the enemy lines. Of course we must not blame the lower level cadres for these problems; the main reason for them is that the leadership organs in training the cadres merely emphasized technical skills and neglected tactical skills. This weakness must be promptly overcome in future and the task of tactical training of cadres must be firmly taken in hand.

Stressing Tactical Skills

Beijing JIEFANGJUN BAO in Chinese 24 Apr 79 p 1

/Article by Yang Zhenhua /2799 2182 5478/, platoon leader of Hong-yi company of a certain unit of the Guangxi border defense force and recipient of merit citation Class 2: "Rid Ourselves of the Mentality of Attaching Great Importance to Technical Skills and Neglecting Tactical Skills"/

/Text/ Our platoon took part in four battles during our self-defense counterattack fighting. We killed 36 of the enemy and destroyed the enemy's firing points and over 20 of his caves of hiding. We gained experience and also learned lessons in these battles, the most profound lesson being that our peacetime training does not yet fully meet the demands of actual combat.

In the past, quite a number of comrades were of the opinion that while technical training had norms and targets, tactical training has no proper configurations. No time and energy was spared to make a concentrated effort with regard to circular numbers and metric numbers, but tactical items which cannot be measured in figures were left aside as a matter of no consequence. For instance, in peacetime training little was done as to studying the tactical characteristics of the enemy or coordinating exercises with infantry and machinegun units, tank units and artillery. In actual combat, all these problems are very important. In the present fighting we saw that the Vietnamese deployed their troop strength and support firepower weaker in front and stronger further to the rear. Firepower mobility was coordinated with troop strength mobility. When the exposed fortifications were successfully overcome in the fighting, the concealed defense works suddenly opened fire as soon as our men approached close enough. Some even waited until our attacking force had passed, then revived firing points, shooting at our troops from the flanks and the rear and using small guns and other firepower on the flanks for a counterattack. As we had given little attention to studying special enemy tactics during our training, our troops in the initial stages of the fighting kept in close formation and lacked all experience as to how to move under enemy fire, how to advance by squads providing cover for each other alternately, changing of various battle formations and the utilization of terrain and surface features. This resulted in quite a few casualties. Later, in actual combat we learned how to fight and how to draw lessons from our experience, gradually gaining the initiative. Our experience of success and failure taught us that good technical knowledge can only be fully effective in coordination with good tactics.

Peacetime training must not only emphasize technical skills but must pay practical attention to tactical training. Changes must be made in the time allotted to the various training subjects, and more time must be given to tactical training. Actually, the technical subjects all have certain standards that can be achieved without taking up much time, but tactical subjects cannot be measured in figures, and only by expending a great deal of time and energy can the soldiers truly achieve resourcefulness and quick-wittedness during their training and become so fit as to have one pitted against 10 of the enemy.

This is a point that the newly enlisted soldiers realized very well through their participation in the fighting. Our platoon had eight newly enlisted men during our fighting in the defensive counterattack. They had joined the army in January and went into battle in February. In 1 month of in-battle training, they had acquired a good knowledge of the weapons they were handling and learned well how to shoot accurately, throw grenades far and explode hidden mines. There was hardly any difference between their mastery of these basic skills and that of the older comrades of several years of service. Only with regard to such tactics as how to make use of terrain and surface features, how to select a path for attack and how to use firepower did they respond less rapidly than the older men and have to learn from the older soldiers all the way. These newly enlisted comrades said: It is not difficult at all to learn how to use conventional weapons; the only important subjects that will have to be studied in future to perfection are the various tactical subjects.

Combined Exercises with Real Weapons

Beijing JIEFANGJUN BAO in Chinese 24 Apr 79 p 1

/Article by Yue Huilai /0149 4850 0735/: "More Combined Exercises of Various Arms of the Service Needed with Real Weapons, Tanks, Live Ammunition and Live Bombs"/

/Text/ The experience of our defensive counterattack against the Vietnamese proves that in modern warfare it is necessary not only to have close coordination between large bodies of troops, but that coordination between battalions, regiments and small units, between infantry and artillery and between infantry and tank units, is also of decisive importance. If we look at the past tactical training of our troops in the light of actual combat experience, we find much that needs to be improved.

Tactical training today is mostly carried out by one arm of the service alone, seldom by several arms of the service together, and even less in combined tactical exercises with real weapons, real tanks, live ammunition and live bombs. Firing of live artillery shells by single guns or by a battalion (as a group) is carried out on the shooting range. The tank units undergo special training only by themselves and seldom in tactical exercises with the infantry. Coordinated exercises of infantry and tanks or infantry and artillery, so fundamental in actual combat, are basically handled as "on paper only," except in some demonstration exercises. Even the various weapons that the infantry is equipped with are seldom used with live ammunition in tactical exercises. For instance, the "overhead fire," often used in combat by light and heavy machineguns in support of the infantry, is seldom practiced in combined tactical exercises. From basic tactical training to combined tactical exercises the troops shoot blank ammunition, fire "dumb" cannon shells and detonate satchel charges, always exercising with the makebelieve instead of the real thing and thus operating

far removed from the realities of actual combat. If we train like this, more often than not we lose all lifelike vividness in our tactical training, oversimplify the complex coordination of the various arms of the service and split apart the organic unity of technical training and tactical training, which seriously and adversely affects the quality of training that our troops are receiving and keeps their tactical training at a very low level for a long time.

How can we render the army's tactical training closer to combat conditions? Integrating the experience gained by the border defense forces in their training in combat, when in only 1 month they completed the battalion's combined training with real weapons and live ammunition, and drawing on the experience of foreign troops in their emphasis on combined exercises of the various arms of the service with live ammunition, it is my opinion that the whole body of troops in training (or parts thereof) should, at the end of their annual basic technical and tactical training, organize combined tactical exercises of varying dimensions of forces and weapons, possibly to be reinforced and supplemented in wartime, joined in by various arms of the service and using the "four real things." Due to the shortage of ammunition for training exercises, it might be considered to have the higher authority combine the annual or semiannual practice shooting with live ammunition of the various arms of the service with the tactical training exercises using the "four real things." In these combined exercises closely resembling combat reality, the cadres and soldiers would learn through practice the coordination of the various arms of the service and the effectiveness of the various firearms. They could directly test the effects of the army's technical and tactical training. It would raise the command ability of the cadres and the capability of the troops for coordinated combat.

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SKILLFUL GUNNER CITED IN FIGHTING AGAINST VIETNAMESE

Beijing JIEFANGJUN BAO in Chinese 24 Apr 79 p 1

/Article by reporter Lu Shuliang /0712 2579 0081/ and correspondent Yang Xianhou /2799 0341 0624/: "Skilful Gunner Chen Wanfu /7115 8001 4395/ Fights Enemy With Awe-Inspiring Heroism; His Shells Hit Wherever the Enemy Flees"/

/Text/ Chen Wanfu, widely known as a skillful gunner, squad leader of the 2d battalion of a certain unit of the Guangxi defense force, led his squad in courageous battles during the fighting to repel the Vietnamese aggressors. Under various difficult conditions, he fired 117 rounds from his 82-mm mortar at the rate of over 90 percent hits on target in powerful support of the fighting men of the infantry. The party committee at the higher level awarded Chen a merit citation Class 2 and promoted him to platoon leader.

In our counterattack in self-defense, the unit to which Chen belonged was to thrust deep into the enemy lines. In a day and night operation of bold forward attacks, the mortar never left his shoulder during the constant push forward. Leading his squad up high mountain ranges and through dense forests, he followed the infantry wherever they charged the enemy. In the afternoon of 21 February, when the unit was just about to cross a valley in the mountains, it was pinned down by fire from the enemy hidden in a bamboo grove. Chen led his squad to speedily occupy a suitable launching site. To save time, he used a simple firing method practiced in peacetime. With the thrust of both hands he furiously rammed the mortar base into the ground. With his left hand he adjusted the direction of fire and the quadrant angle of elevation, and with his right hand he inserted the shells. The first shot was right on target. He followed up with two more shots which exploded among the enemy. At that time the enemy, halfway up the mountain to his right, had spotted him and sent over a salvo of machinegun fire. This did not intimidate Chen in the least. He quickly turned and fired off three shells that whistled over and silenced the enemy machinegun. The army unit quickly seized the opportunity to rush through the once-blockaded line.

Day and night during the counterattack in self-defense, Chen felt a strong sense of responsibility toward his fatherland and his people and always acted steadfastly and cool-headedly. He used every possible means to accomplish the tasks assigned to him by his superiors. One day, the positions of the 4th company came under fire from the enemy's 60-mm guns. The commander ordered Chen to counterattack with his mortar. At that time visibility was bad and as the cunning enemy fired only intermittently, Chen had a hard time making out his target and its distance. He applied skills learned in

peacetime, made careful observations, spotted the enemy, correctly measured the distance and immediately ordered his men to fire. The first shot was too far to the right and Chen boldly made a correction. The second shot was right on target. Chen himself then acted as gun layer, repeatedly rigged up the mortar and changed rigging orders over 10 times, the maneuver each time being carried out speedily and accurately. The badly battered enemy ran for his life and in his rush left the 60-mm gun behind. The men of the fourth company praised Chen with one voice: "What a great fellow, he deserves to be called a marvellous gunner!"

In all his battles, Chen made full use of what he had learned in peacetime military exercises and had at his disposal a variety of tactics that were sure to defeat and subdue the enemy. Early one morning, the 2d mortar company was ordered to support the infantry in attacking the enemy at Nalong. Chen Wanfu led his squad in an uphill charge to occupy a good launching site. He used the little time when the comrades of the infantry were spread out under cover to examine the terrain and assess where the enemy would emerge, where they would offer resistance and in what direction they would flee. Chen measured the different distances, calculated the various gauges and determined the various firing methods. When the infantry had advanced halfway up a certain elevation and became blocked by heavy enemy fire, orders arrived from above to support them with artillery fire. Chen led his squad in launching mortar fire, which fell so accurately on target it was as if the shells had grown eyes, and this caught the enemy completely by surprise. By that time the other artillery squads had also occupied good launching sites and Chen directed his own squad and the other brotherly squads to open fire together. When the infantry saw how the shells rained down on the enemy lines, blowing them to bits, they called out: "Good shooting, good shooting!" They jumped up and boldly charged. The enemy, scared out of his wits, hurriedly fled beyond the mountain range. Chen had already cleverely anticipated this move by the enemy and immediately adjusted the range of his fire. Wherever the enemy fled, the shellfire followed him immediately, powerfully supporting the infantry in their attack, in which they captured three positions in high terrain and annihilated one reinforced company of the enemy.

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GUIDANCE GIVEN ON PROBLEMS WITH SOLDIERS BUYING RADIOS

Beijing JIEGANGJUN BAO in Chinese 3 May 79 p 1

/Article by Li Jizhuang /2621 4949 8369/ and Li Minjie /2621 2404 2638/: "Vigorous Guidance, Strong Administrative Control--The Method of Unit 84843: How to Deal with Problems Arising From Soldiers Buying Radios?"/

/Text/ The rescinding by some army units of the prohibition on soldiers purchasing radios was enthusiastically welcomed by the soldiers. Many soldiers used the radios to learn about politics, gain scientific and cultural knowledge and enrich their cultural and recreational life. Obviously, this is a good thing and it was only right to do so.

However, in some units new problems arose from the fact that soldiers bought radios. How to handle these problems? Some units gained the experience that one should above all think of the need for modernizing the army and not "give up eating for fear of choking." As to the problems that arise, they should be given deep and painstaking thought; correct guidance and strong administrative control should be exercised, supplemented by necessary regulations. All this will of course require much additional work and some additional "bother." However, in our efforts to conform with the shift in the emphasis of work, we must not merely pursue the simple and easy when we study new conditions and solve new problems.

When the news spread that the political department of the Guangzhou military units had rescinded the prohibition on soldiers buying radios, many soldiers of Unit 84843 were extremely happy and rushed to tell each other the news. In less than a month's time, over 40 soldiers had bought radios, using them to listen to the news and to acquire scientific and cultural knowledge. After meals and after classes, they also enjoyed the literary and art programs. In this way they broadened their horizons and increased their knowledge, and at the same time invigorated life in the company.

However, as more soldiers bought radios, new problems arose. Some soldiers would listen to their radios at all times and in all places, not only during military training lectures and while on duty, but even after lights out, thus adversely affecting the

normal order of life. Some soldiers, victims of curiosity, even listened to forbidden broadcasts. Some soldiers bought large instruments that not only proved to be in the way at alarm assemblies but also impaired the internal uniformity and tidiness.

What to do about it? In the opinion of the leadership organs and cadres at all levels of this army unit, allowing the soldiers to buy radios brought many benefits, and the problems that arose could be dealt with satisfactorily if only proper guidance was rendered. Many companies used the routine squad meetings to organize repeated studies of the resolution issued by the Third Plenary Session of the 11th CCP Central Committee to clarify the task of modernization, demanding of the soldiers an even higher level of scientific and cultural knowledge and correct handling by everybody of the relationship of study and recreation. They directed attention to listening to news and lectures on scientific and cultural topics and also regularly commended those men who had made exemplary use of radios, so as to encourage everyone to study science and cultural subjects. Chen Dewei /7115 2867 0251/7, a soldier of the second company of rocket artillery, diligently listened to the radio lectures on scientific and cultural topics and was thus able to speedily raise his level of scientific and cultural knowledge, so that the party branch of his company made him a "little teacher."

In order to maintain normal order and unity of action, several companies also set forth four demands concerning the operation of radios by soldiers: 1) Radios must not be operated during regular classes or collective activities, after bedtime, on guard or on other duties, and the radio must not be tuned to foreign broadcasts. 2) When not in use, radios must be kept uniformly in certain places and not left about indiscriminately. On marches with heavy pack and at alarm assemblies, no large radios can be taken along. 3) In ordinary circumstances, the daily news items and lectures on scientific and cultural topics are all to be listened to collectively; literary and art items may be listened to only outside of regular class time and on holidays. 4) Soldiers who live with their families in straitened circumstances must consider the reality of their situation and not borrow money to purchase radios. If they need to listen to certain programs, they may use the company's communal radio.

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HEART-TO-HEART TALKS HELD WITH CADRES TO ELIMINATE PROBLEMS

Beijing JIEFANGJUN BAO in Chinese 8 May 79 p 1

/Article by Gao Chunfang /6750 2504 2455/ and Zhang Shenglun /1728 0581 0243/: "Eliminate Misunderstandings, Open Up Ideological Channels, Strengthen Solidarity"/

/Text/ Since the beginning of March this year, Wang Zhengtian /3769 2973 3944/, commander of a division of engineer troops, together with Yang Guochen /2799 0948 5256/, political commissar, spent over 40 days visiting the various regiments of their division one by one for an intimate discussion to solicit opinions and clear up misunderstandings so as to enhance solidarity.

In February this year, at the enlarged meeting called by the divisional party committee to study the thorough implementation of the spirit of the Third Plenary Session, comrades aired many complaints concerning the divisional leadership. Due to the limits of time, the cadres of some regiments did not have sufficient opportunity to be heard at the meeting, and some were apprehensive and did not fully reveal what was on their minds. At the conclusion of the meeting, division commander Wang Zhengtian and political commissar Yang Guochen came to the conclusion that to conform with the shift of emphasis in the work of the party and to concentrate all energies on an effective modernization of the military units, it was necessary first of all to achieve unity between the leaderships at the divisional and the regimental levels, reach a common understanding and take concerted action. The two men therefore decided to proceed together and seek out the leading cadres of the various regiments one by one for heart-to-heart talks and thus work toward enhancing solidarity.

In these heart-to-heart discussions, commander Wang and commissar Yang listened attentively to the opinions aired by the comrades and accepted justified criticism with open minds. It happened that last year the commander of a certain regiment disagreed with the division in the way certain engineering projects were planned and arranged. Things were said that should not have been said. Commander Wang had criticized the regimental commander several times, and misunderstandings had arisen between the two. During the present heart-to-heart talk, he brought it all out into the open. After listening attentively, commander Wang discovered that in his past criticisms he had not been sufficiently mindful of such aspects as an analysis of the underlying reasons, providing occasions for discussion and keeping within the proper limits of speech, etc, and thereupon, on his own initiative, submitted a self-criticism, and at the same time pointed out his inability to handle correctly the relationship between the section and the overall situation. In his heart-to-heart talk with the political commissar of the regiment concerned, commander Wang made

another self-criticism. On witnessing the self-criticism of commander Wang, the other side also earnestly examined the problems that existed in themselves. As a result, the misunderstanding was removed and greater trust between the two was established. A regimental deputy commander who had been somewhat wronged in the past had rather strong complaints against some in the divisional leadership. In this heart-to-heart talk, commander Wang and commissar Yang earnestly listened to his complaints, examined the mistaken methods that had been used against him and helped him "relieve himself of his mental burden." He was deeply touched and said: If the leadership on their own initiative come to our doorstep for a heart-to-heart talk, half of the resentment is gone, and if this is followed by an earnest heart-to-heart talk, all resentment is completely eliminated.

Commander Wang and commissar Yang also took care to focus on the shortcomings and weaknesses of certain comrades, and through frank discussion that emphasized tradition and workstyle, they patiently and painstakingly rendered assistance and education. There was a young cadre who on being appointed regimental deputy commander put on great airs and demanded better pay and treatment, thereby incurring the criticism of the masses. Commander Wang and commissar Yang repeatedly lectured him on the principle that leading cadres must give much to the people but demand little from the people, and thus inspired him to make a conscious effort to remedy his shortcomings. There was a regimental commander who was passive about benefiting from past experience and lessons. He showed little spirit to take charge of work. Commander Wang then spoke to him about his own past and his experiences when he, Wang, was regimental commander and in this way helped this man correctly sum up the experiences and lessons of the past. Commander Wang and commissar Yang learned that there was a man in an important leadership position in one regiment who was incompetent as to leading the cadres in assistant positions to play their full role, which had an adverse effect on the solidarity and on work. Wang and Yang pointed out the essentials of a division of labor, etc, so that the cadres in assistant positions gained the due powers of their offices, and work was effectively accomplished as a joint effort.

As to some questions in the work of modernization of all units of the division, such as how to insist on having construction constitute the core work and how to strengthen political and ideological work, commander Wang and commissar Yang explored these questions in these heart-to-heart meetings in their discussions with all concerned, then based their conclusions on the collective wisdom and all useful ideas presented, to arrive finally at feasible methods to be adopted. In the past, they had only hazy notions of the ideological and work conditions of many cadres serving with the regiments. Through the present heart-to-heart talks, they gained a fairly complete understanding and discovered several unreasonable conditions in the way the cadres were being used and dealt with. They prepared a report to the divisional party committee and planned readjustments. On the basis of these heart-to-heart talks, the standing committee of the divisional party committee furthermore planned to start special studies on the question of strengthening the party committee teams and building up the cadre contingent, and to determine concrete measures in this respect. The general reaction among the regimental cadres was that the present heart-to-heart talks helped to strengthen out the ideology, restore ease of mind and arouse greater enthusiasm for the energetic pursuit of the four modernizations.

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TASKS FOR ARMED FORCES MODERNIZATION SPELLED OUT

Beijing JIEFANGJUN BAO in Chinese 15 Jun 79 p 1

/Article by Commentator: "Speed Up Modernization of Our Armed Forces on the Basis of Existing Weapons and Equipment"/

/Text/ Along with the shift in emphasis of the work of the whole party, the emphasis in the work of the armed forces has been shifted to accelerating the building of a modern revolutionary army. If we carry out the shift in the emphasis of the armed forces' work, what principles should we observe, and where should we begin? The Central Committee Military Commission has already made it clear that we must continue, in a down-to-earth manner, to implement thoroughly the guiding principles, tasks, and methods decided upon by the expanded conference of the Military Commission in 1975, the Military Commission meeting in 1977, and the Whole Forces Political Work Conference in 1978, all under the guidance of the spirit of the Third Plenary Session of the 11th Party Central Committee. These principles, decided upon by the Military Commission, are thoroughly appropriate to the actual conditions in our armed forces and are extraordinarily correct.

The general principles, tasks, and methods determined by these three meetings of the Military Commission have a thoroughly distinctive thought running through them, which is that we must carry out the guiding principles of "The military must reorganize" and "We must be prepared to fight;" restore and develop our armed forces' excellent tradition under the new historical conditions; and build our army into a modern revolutionary army on the basis of existing weapons and equipment. Most comrades are clear on this point, but some still lack a correct perception of it. Some of them feel that if we are to shift the emphasis of work, we should bring in a whole new formula; otherwise, "old men and old knives will put on the same old show," and this would be nothing like modernization. Others feel that if we are to modernize, we must have modern weapons and equipment, for "if equipment is not improved, the emphasis will not be shifted well, since shifting or not shifting is all the same to bayonets and hand grenades;" thus they view modernization as purely the replacing of weapons and equipment. The common problem in both of these one-sided perceptions is that they discard the existing foundations and do not start from the real conditions of our country and our army at present.

Just as all tall buildings must start from level ground, whatever we do cannot be separated from our actual foundations. Construction of a modern revolutionary army must be on the basis of the reality of our country and our army, and must be done from existing foundations. In the early period after the founding of our country, Comrade

Mao Zedong pointed out that the Chinese People's Liberation Army, from its original foundations, should be built into an excellent modern revolutionary army. He demonstrated that the building of our army should be based on the existing foundation with a view to the direction of future development. According to Comrade Mao Zedong's indications, our army, through the exertions of the whole army, had advanced a large step toward modernization and had gradually developed into a composite military force having various service arms on a commensurate scale. At present our army is conducting a shift in the emphasis of its work and is speeding up the advance toward the goal of being a modern revolutionary army to an even higher level, this being a requirement for preparedness and the situation and demand for protecting our four modernizations and stabilizing the dictatorship of the proletariat. If we do not modernize and do not accelerate the achievement of modernization, we will not greatly increase our army's combat strength but will be passive and vulnerable to attack, in which case it will be difficult to complete successfully the protection of our country's spiritual mission. However, modernization of the armed forces cannot be divorced from the foundation presented by the national economy, cannot be divorced from the modernization of agriculture, industry, or science and technology, and cannot be divorced from the existing weapons and equipment of our armed forces. We can only begin with the present reality of our country and our army on the foundation presented by existing weapons and equipment, on the foundation of existing material and technical strength, and on existing political and ideological foundations, developing the effects of these foundations to the greatest extent possible, if we are to make solid advances. If we do not see this and if we ignore the existing foundations, assuming that nothing can be done on the basis of existing foundations, but instead wait passively for modernization, we may get bogged down in fantasies, and that does not make modernization a reality.

If we want to build an excellent modern revolutionary army, we must of course improve our army's weapons and equipment as rapidly as possible. Weapons and equipment are a special foundation of the armed forces and an important factor in combat strength. In building a modern revolutionary army we cannot but place high emphasis on solving the problem of weapons and equipment. The Central Committee Military Commission is actively improving weapons and equipment, starting out from this viewpoint. It must be seen, however, that modernization of the armed forces is not simply a question of weapons and equipment, but must include making various kinds of preparations for handling the advanced weapons and creating appropriate conditions. /These conditions include/ such things as scientific establishment systems and organizational management, crack leading bodies and guidance organs, correct military thinking and combat doctrine, a high degree of political awareness, the necessary scientific and cultural knowledge and a skilled technical level in tactics, an excellent organizational discipline and combat style, staunch and powerful party leadership and political work, restoration and development of excellent traditions, development of a spirit of patriotism and revolutionary heroism, etc. Even if we were to have advanced weapons and equipment, without these conditions, they would only be a kind of possible combat strength, and could not constitute real combat strength. Clearly, if we are to strengthen these areas and improve these areas, we must begin with the existing foundations.

At the same time, the modernization of our army's weapons and equipment cannot be separated from the reality of the modernization of industry, agriculture, and science and technology. It can only develop along with the development of socialist modernization and be realized along with the realization of socialist modernization. The fact is that in modernizing its armed forces, no country in the world can discard

existing weapons and equipment and exchange them for new, but can only renew them bit by bit, renew them generation by generation. This is a process. To separate it from the existing foundations and to hope to ascend to heaven in one step, completing everything in one stroke, is unrealistic. Therefore, we cannot discuss modernization of the armed forces in isolation from the development of the national economy or the existing foundations of weapons and equipment. Although the weapons and equipment of our armed forces are somewhat backward compared to those of some developed countries, it no longer amounts to a ration of millet and a rifle, as during the war, and we already have some comparatively modern, even comparatively sophisticated, weapons and equipment. If we base ourselves on our existing equipment,really master it, and continually strengthen, improve, and develop it, our army's combat strength will certainly be improved. Gradual modernization of our existing foundation is not impossible and could represent a great accomplishment. Our modernization will depend on solid work, not waiting for higher-ups to issue modernization. Nor can we count on importing modernization from foreign countries. Even if we import some advanced weapons and equipment, and that for the sake of improving our own modernization capabilities, we will still be able to modernize only by depending on our own foundation and our own self-reliance. It should be seen that the present problems are that we have not completely mastered our present weapons and equipment and that the present military level and leadership capability of the troops certainly does not exceed the level of existing weapons and equipment. In particular, there are large numbers of problems that we must study, reform, and adjust with regard to the establishment of cadre corps and leading bodies at various levels, establishment systems, education and training, organizational guidance, management capabilities, the level of scientific and cultural knowledge, etc. If these problems are not solved, not only will we be unable to master more advanced weapons and equipment, but we will not even be able to skillfully master existing weapons and equipment or to develop their potential fully. Some comrades do not really recognize the function of the existing foundation, and the possibility of being unrealistic and building up our strength with one mouthful is a kind of blindness which must be overcome.

We advocate basing ourselves on the existing foundations and accelerating the revolutionization and modernization of our army, at the same time determining this according to our army's tasks and the present international situation. Our army is a pillar of the dictatorship of the proletariat and an armed force for the protection of socialist modernization. Imperialism, especially social imperialism, still exists in the world, and, as before, there is danger of war. There is a strong quality of suddenness about modern warfare, but although we cannot wait until we have modernized before preparing for war, neither can we not actively pursue modernization just because we were preparing for war. The fact is that our army has historically employed inferior equipment in winning over enemies that had superior equipment. This tradition must be further developed in the future. Even though our weapons and equipment have improved considerably, we still must be prepared to win with inferior equipment over enemies that have superior equipment. We must, under the guidance of this thought of winning with inferior equipment over enemies that have superior equipment, base ourselves on our existing weapons and equipment and be prepared to fight at any time. At the same time, in the process of preparing to fight, we must accelerate the revolutionization and modernization of our army. Only in this way can we put our army in an invincible position. Our experience in the recent self-defensive counterattack against Vietnam proved that in order to be able to fight well and win, we need only develop fully the power of political and ideological work, strengthen education in patriotism and revolutionary heroism, conscientiously carry

out military training and various aspects of combat preparation, and base ourselves on existing weapons and equipment. We should conscientiously summarize the lessons of experiece in education and training over the past few years, especially emphasizing the study and utilization of experience in the self-defensive counterattack fighting on the Vietnam border, fully develop the activism and creativity of the broad officers and men of the PLA, truly raise education and training to a strategic position, and, with an eye to the characteristics of modern warfare, energetically reform education and training, renew technology, strengthen the production of scientific research, and exploit and develop the full potential of men and materials, thus accelerating the advance of the revolutionization and modernization of our army and improving its combat strength.

The full realization of the spirit of the three meetings of the Military Commission--basing ourselves on our existing foundations, and accelerating the revolutionization and modernization of our army--also requires a breadth of vision vis-a-vis the whole situation, basing ourselves on our own tasks and coordinating closely with the reality of our own units. For example: units that undertake responsibility for training tasks should strive to improve education and training; the various schools and academies should strive to train troop personnel to be both Red and expert; units with responsibility for national defense scientific research and war production should carry out their scientific research and war production well and at all costs with a plan, shorten the process of weapons and equipment modernization at key points, and at the same time devote attention to a certain amount of training; units undertaking construction, road repair, and production tasks should speed up mechanization and strive to raise their labor production rate; units on the border and on islands in the sea should take up their war preparedness duties and complete their garrison tasks, at all times being vigilant for and crushing all enemy invasions, disturbances, or destructive activities; the military district systems in each province must carry out the "three fulfillments" of militia work, striving to raise the combat strength of the militia, etc. All that is necessary is for each unit and each person to be able to start from this whole situation of accelerating the modernization of the revolutionary armed forces, coordinate with the undertaking of duties and concrete reality, make a creative effort, and do their own jobs in a down-to-earth way, whereupon the modernization of our army can develop continuously on the existing foundations and can gradually achieve realization.

As far as the party committees at various levels and various grades of leading cadres are concerned, building a modern revolutionary army on the basis of existing foundations is no light burden, but a heavy one. Since we cannot cast aside the existing foundations, if we are content with things as they are and hesitate to move forward, we will fall into a state of inertia. These two tendencies are disadvantageous for the revolutionization and modernization of our army, do not suit the requirement that our army be prepared to fight, and must be prevented and overcome. Under the guidance of the spirit of the Third Plenary Session of the 11th Communist Party Central Committee, we must continue to delve deeply into and thoroughly realize, in a down-to-earth way, the guiding principles, tasks, and methods determined by the three conferences of the Military Commission. In thoroughly implementing them, uphold seeking truth from facts, start from reality in all things, relate theory to facts as the basic principle of Marxism, delve into reality, carry out investigation and research, develop democracy, emancipate thinking, start up the machinery, understand the new circumstances, study new matters, solve new problems, summarize new experiences, and constantly enrich and develop the spirit of the three conferences of the Military

Commission in practice to the point where we are creating and advancing. We must certainly unify the thinking of the whole army behind the spirit of the Third Plenary Session, organize the actions of the whole army toward the realization of the guiding principles and tasks determined by the three conferences of the Military Commission, mobilize all positive factors, strengthen our confidence, plant our feet on solid ground, struggle arduously, raise the military and political quality of our army to a new level as rapidly as possible on the basis of the existing foundations, raise war preparations to a new level, and raise our army's revolutionization and modernization to new levels.

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MILITARY AND PUBLIC SECURITY

WEAPONS DEVELOPMENT DICTATES COMBAT METHOD CHANGES

Beijing JIEFANGJUN BAO in Chinese 16 Jun 79 p 3

/Article by Li Yanming /2621 1693 2494/: "Weapons Development, and Changes in Combat Methods"/

/Text/ There is a basic viewpoint to Marxist military dialectics, and that is that weapons development determines changes in combat methods. This viewpoint tells us that armed forces must forge ahead toward modernization and not only must develop military science and technology and improve weapons and equipment, but at the same time must develop their own military academic thinking relative to all this, and study and master advanced combat methods. If we do not pay attention to studying the dialectical relationship between the two, we may one-sidedly advocate and passively await improvements in weapons and equipment, meanwhile neglecting to study and probe into advanced combat methods; this may lead to our being backward and vulnerable to attack in modern combat.

For many years there has been a body of opinion in military academic research that there is a distinct class character to combat methods; we are an advanced proletarian armed force, and therefore our combat methods are naturally the most advanced. We feel that this view denies a most basic fact, which is that the internal factor determining changes in combat methods can only be the development of weapons and equipment. All other factors, including changes in the class status of the soldiers and the will of talented commanders, do no more than provide external conditions to the changes in combat methods. It should be said that in military science, military theory that takes the phenomenon of combat as the object of research--such as the origins of combat, the nature of combat, the objectives of combat, the character of combat, etc.--despite the fact that these aspects have an intense class character, are not in the same category with combat methods, and we cannot because of this draw the inference that combat methods have class character.

Some comrades believe that combat methods are created by men, that they represent a combination of men and weapons, and that to have weapons and equipment alone, with no men to use them in battle, would make the weapons and equipment something that could not develop any function. According to this viewpoint, it seems that combat methods must be subject to a certain restriction of class consciousness. In fact, this is not the case. We recognize that the origin of any new combat methods must always be proposed by man and must be employed in combat by men. The point is that man, inproposing a certain combat method, is certainly not acting arbitrarily; wishing to do something and then doing it, but something that adheres to a certain objective law, a fruit of

the development of subjective activity. If men subjectively propose combat methods that violate the objective reality of weapons and equipment development, they will surely run into a stone wall in combat practice and /the methods/ will have to be revised. Therefore we can say that weapons and equipment determine combat methods, and the fact that men propose and employ a certain combat method indicates the objectivity of the laws and the subjective activity of man's knowledge of the laws, in which the subjective must certainly conform to the objective but cannot be substituted for the objective.

To explain this point, we might well talk about how weapons and equipment determine combat methods.

We know that weapons and equipment themselves have three basic key elements, which are the attack force, protective force, and mobility. These three essential elements are not ordinarily combined in one article of weaponry or equipment, but no complete weapons system can lack these three elements. The decisive effect of weapons and equipment on combat methods is, in reality, only the result of the effect on combat methods of these three elements separately and in combination. Of course, the decisive effect of these three elements on combat methods is certainly not divided into primary and secondary, but all take equal shares. Generally speaking, in the course of weapons and equipment development, the attack force is the core of change. In the history of human combat, the attack force of weapons and equipment has gone through three class-character developmental changes: cold weapons, shooting firearms, and guided missile nuclear weapons. Combat methods in the history of human combat have also had qualitative changes that accompany this. During the period of cold weapons, what was employed was hand-to-hand combat with naked swords by concentrated square units. "Naked swords cross, the treasured sword breaks, two armies contend to determine life and death" was written about this very kind of combat method. By the time of the period of firearms, the basic combat method was for a dispersed band of troops to advance while firing. The period of guided missile nuclear weapons has just started, and judging on the basis of the circumstances we have seen up to now, its combat method has the characteristics of highly dispersed troop formations and three-dimensional operations. From this we can see that every time an attack force has been increased, it has made the old combat troop formations more vulnerable to casualties, forcing people to change and even abandon the old troop formations and adopt troop formations appropriate to the new attack force. Moreover, these changes in combat troop formations are the principal sign of transformations in combat methods. Protective force is a measure taken to counteract attack force, and its effect on transformation of combat methods is subordinate to that of the attack force. Although mobility serves the attack force, in that it makes it possible for the attack force to reach its objective, its development follows not that of the attack force but the development of communications implements. Therefore it has a certain independent effect on the development of combat methods. Historically, along with the advance in human communications implements, there have appeared one after the other infantry warfare, cavalry warfare, chariot warfare, naval warfare, tank warfare, and aerial warfare.

The capabilities of weapons and equipment determine the methods of their employment, and the weapons and equipment of the two opposing sides and their method of employment determine the combat methods. For example, during the firearms period, the basic combat method of defenders was to fire from behind cover, killing and wounding the enemy through firepower. The attackers, in order not to be killed or wounded by the defenders' fire, and in order to break through their opponents' defense, had to use

firepower as a preparation and to attack under cover of that fire (which suppressed the fire of the defenders). Also, tanks are a comprehensive weapon, simultaneously having firepower, defensive power, and rapid mobility, so the most advantageous combat method for them is to advance and attack en masse. To counter enemy air force raids, as well as to obtain long-range support fire and increase the speed of attack, one side must use its own air force, surface artillery, antiaircraft artillery, air-defense guided missiles, and airborne troops to support the combat, and at this time the combat methods are transformed into a coordinated combat method by the various service arms.

There is one more point that must be clarified here: combat methods always advance with the development of productive force and cannot turn counter to it; this point is different from tactics. So-called tactics are really the actual employment of existing combat methods by commanders, and they include encirclement, drive,feint, supplementary attack, containment, surprise attack and ambush, as well as penetration and separation, flanking and surrounding, holding a defense, active defense, feint to the east and attack in the west, beseiging the enemy to strike at his reinforcements, and such unlimited permutations. Although these things are adaptable and changeable in actual use, the tactical concepts are stable in both extension and connotation, and these same tactics have been used in ancient and modern times, in China and abroad. Moreover, combat methods must continually replace the old with the new in the course of historical development, and the fundamental factor promoting this kind of supersession is the development of weapons and equipment. When old combat methods are suddenly inappropriate to new weapons and equipment, they must be replaced by new combat methods. Everyone knows that if we were still to employ in modern warfare the concentrated-square battle formation of the cold-weapon period, we would suffer a harsh penalty and the mockery of history.

When we say that the development of weapons and equipment determine the changes in combat methods, does this deny the human factor? No. Acknowledgement of the objective law that the development of weapons and equipment determines changes in combat methods is not the same as saying that we have already found the combat method most suitable to new weapons and equipment. And if we are really to find it, it must still be through man's subjective efforts. Although combat methods themselves have no class character, class consciousness influences people's ability to recognize new combat methods. In general, advanced classes represent the new productive force, are richest in revolutionary creative spirit, can most easily cast off outmoded academic concepts, and, starting from reality, will consciously probe and master new combat methods. The backward classes thus have always been hampered by their outworn system, and adhere rigidly to their past experience and conservative academic concepts. Even if they are the first to master new types of weapons and equipment, it is by no means certain that they will be the first to find combat methods appropriate to these new weapons and equipment. At the same time, in the employment of new combat methods there are considerable differences in the way they give play to the effect of subjective activity. Even though foxhole warfare has broken the boundaries of "different class backgrounds of soldiers" and has been generally adopted by the armies of all nations, armed forces of different classes get vastly different results within employing foxhole warfare in actual combat. It is precisely in this sense that we say that the principal determining factor between victory and defeat in warfare is men, not material.

Since changes in combat methods are determined by the development of weapons and equipment, then all national armed forces in the same period of weapons and equipment development, no matter what their class attributes may be, can learn from each other's strongpoints to make up for their own weaknesses, and can study each other where combat methods are concerned. In today's world, military science and technology are advancing with each passing day, and the development of new weapons and equipment is more rapid than in any other period in history. This encourages the further multiplicity and complexity of new combat methods. We should conscientiously approach reality, strive to study and inquire into advanced combat methods, and develop our military academic theory to suit the needs of modernization of national defense and future counter-offensive warfare.

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MILITARY AND PUBLIC SECURITY

EXPLOITS OF GUIDED MISSILE DESIGNERS DESCRIBED

Beijing JIEFANGJUN BAO in Chinese 17 Jun 79 p 2

[Article by Zheng Zhiren [6774 3112 0117] et al.: "Painstaking Care in Drawing Blueprints--Chronicling the Work of Scientific and Technical Personnel of a Certain Guided Missile Engineering Design Institute"]

[Text] "The stars are bright and the night wind blows, as under my lamp I draw blueprints; tomorrow the fiery dragon soars into the sky, and the mountains will dance and the seas smile at its splendor."

This is an heroic poem of the scientific and technical working personnel of a certain guided missile engineering design institute, and is also a portrayal of their hard work for the modernization of national defense. Chronicled below are some passages describing how the scientific and technical working personnel of this institute, in order to raise our country's guided missile engineering work to a new level, take pains and spare no effort, and in their work are conscientious and meticulous, keep on improving, and splendidly complete the scientific research mission assigned to them by the party and the people.

Thoughtful and Meticulous in Setting Plans

"Ticktock, ticktock,...." The clear and melodious sound of messages being transmitted came from a brand-new message center; outside, erected in large numbers, a forest-like network of antennas presents a magnificent sight set off even more by the blue sky and white clouds. Seeing this newly built guided missile base communications station, people naturally think of the hard work done by the designers.

The communications station sends messages long distances and it has many places to and from which it communicates, so the demand on the quality of its electrical circuits is high. Undertaking the task of designing the communications station are youthful technicians Huang Yongquan [7806 3196 2164] and Li Guixiang [2621 2710 4382]. In order to attain the technical performance that was demanded, when working on the design they earnestly and conscientiously, being scrupulous about every detail, did their best to thoroughly perfect the design plan. They looked

through a large amount of Chinese and foreign written materials, and plunged into the design work round the clock, carefullly turning over in their minds everything from the selection of the antennas to the way they were to be erected, from the layout of the internal equipment to the method of connecting the machine circuits, and repeatedly deliberated on these matters. When making structural calculations for one kind of antenna, owing to the fact that he did not have complete methods and formulas for the calculations, Huang Yongquan painstakingly searched for and conscientiously probed for them. For over 10 days in a row, he worked overtime deep into the night, comparing over 1,000 pieces of data that he had calculated. He then went to a certain design institute and requested instruction from the experts and technicians in this field, and finally got the proper data. In order to select a new kind of high-gain, high-capacity antenna, they paid visits to 8 concerned units in 4 provinces and municipalities. Hearing that a communications station in a certain municipality in northwest China was using a new kind of antenna, Huang Yongquan immediately left to visit the center. Disregarding the fatigue of a long train ride, he walked over 10 li to the communications center on the outskirts of the municipality. After getting a detailed understanding of this kind of antenna, he asked for its technical specifications. In order to make the design plan suitable for the geological and climatic conditions at the construction site, they went to the site and questioned the local meteorological station and experienced peasants. When they found out that the site was in an earthquake zone and a lightning zone, they carefully considered measures to provide protection against earthquakes and lightning, and made new demands on the design from a technical standpoint.

During the planning and designing, they paid particular attention to effecting savings. Under the premise of satisfying the demands of each technical norm, they reduced expenditures as much as possible. According to accepted practice, when antennas for a communications station are erected in a lightning zone, several big and tall lightning pylons must be built. Huang Yongquar and his comrades made a study and decided to make some of the antennas in the form of pylons as a substitute for pylons which have the special purpose of deflecting lightning, and as much as possible to use connecting rods in the construction, so that for every two antennas one pylon was saved. In designing the installation of the wired equipment, Li Guixiang thought that the cost of manufacturing the high-frequency electric cables was high, and more often than not more money would be spent on the cables than on the machines and equipment. Revising the blueprint 3 times, he made the installation of the machines and equipment as compact as possible so as to shorten the wiring distances, thereby both improving circuit quality and saving funds for the state.

Busily Surveying While Making Light of Hard Work

At a certain place on the southern border of the motherland, a dense primeval forest covers undulating mountains. Special team leader Li Jianzhang [2621 1696 4545] led three technicians here, in concert with the geodetic survey element of a certain unit, to survey and design a transportation road for a guided missile launch position.

In a small remote mountain village, the comrades of the surveying team put down their knapsacks and instruments. Receiving from their Yi nationality "papas"

bed rushes and oil lamps, they made themselves at home in their new quarters. From then on, they began intensive work. Early every day they set out for the mountains to do their job, their instruments strapped to their backs and carrying on shoulder poles their field rations and canteens. The primeval forest, in which investigation showed no trace of human presence, was crisscrossed with ravines and overgrown with brambles. At times they used machetes to cut a path through the undergrowth, and at times they ascended precipices by hauling themselves up on vines. In the early morning their bodies were covered with dew, and by noon beads of sweat covered their faces. The brambles scratched and tore their faces and necks, but no one complained. Every day when night had fallen, disregarding the fatigue from their day's trek, the comrades prostrated themselves under the lamp and sorted out the results of their survey, and marked them one by one on the blueprint. On the over 100 li-long route, owing to the fact that the terrain was extremely complex, on average every li of the road had several tens of design stake markers and bridges or culverts. Thinking that "it is better to suffer in every possible way than to make the slightest mistake," the comrades of the investigation team conscientiously and seriously planted firmly and accurately every stake marker. Sometimes, in order to determine the position and span of a culvert, they followed a mountain stream all the way to its source, climbing high and precipitious mountain peaks to observe the terrain and running water line and to judge the direction and maximum rate of flow. In some sectors of the area, there were cliffs above and deep gullies several tens of zhang below, so that a fall would endanger one's life. Without shrinking back in the slightest, they always investigated until everything was clear before taking a break. One overcast and rainy day, when the comrades were back in their quarters sorting out the results of their surveying, they discovered that the elevation of a stake marker did not tally very well with the conditions on the spot. Li Jianzhang immediately took along one comrade to make an on-the-spot reexamination. On a muddy, narrow, winding trail, the two men walked forward, slipping and stumbling, and not caring in the slightest about the danger of tumbling into deep gorges. With great difficulty they crossed a mountain and found a river in front of them. The swift river water flowed with a roaring noise. The two men resolutely went down into the water and, shifting their staffs from hand to hand, moved forward step by step and with great difficulty crossed the river. On coming to the site of the stake marker, they braved wind and rain, set up their instruments and took measurements until the data was completely accurate, and then returned to their base covered with mud and water.

The surveying team battled for 3 whole months in this harsh environment, walking an average of over 40 li every day. Through this survey the proper alignment of the route and the positions and spans of the bridges and culverts, as well as the amount of cubic meters of earth and stone for slope protection were determined, and the team also made a working drawing of the site.

Constantly Improving Designs

With regard to the pneumatic ball valve now used in the fuel system of our country's guided missiles, owing to the fact that the mechanism that causes the pneumatic effect is outmoded, units that have used it for many years reported that the valve leaks easily and is cumbersome. Engineer Zhao Chang'an [6392 7022 1344]

decided to assiduously tackle this key problem and change this backward feature. In a joint designing team organized by the units concerned, Zhao Chang'an had the principle task of designing a valve with two kinds of specifications. He went to various places and did a great deal of investigation and research, took apart with his own hands the foreign pneumatic ball valves of the 1970's, and translated and consulted over 10 documents on the subject. After studying and analyzing the problem from many angles, he considerably improved the original ball valve in light of the specific demands placed on the fueling system. In a 3-month period, he was so absorbed in his task that he forgot food and sleep, working intensely on calculating and recalculating all the parameters, changing his blueprint again and again, making dozens of drafts, making comparisons, and from among the drafts sifting and choosing. Finally he completed the design of a ball valve of two diameters, which both increased the valve's sealing properties and greatly reduced its weight, thereby satisfying the units' urgent requirement.

However, Zhao Chang'an was not content with this achievement. In order to test the newly designed ball valve's performance and to further perfect his design, he and technician Huai Huifang [2037 1920 5364] went to the designing institute many times. With the energetic support of the units concerned, they performed tests and determined the ball valve's flow twist pattern under different pressures, flow rates, and pretensile strengths. During the tests he and the technician together studied specific plans, and he went in person to workshops and took part in actual operations. With the workers and master workers, he raised valves, tightened nuts, moved tubing, and installed instruments, always being in the forefront. Once, when a sealing ring was receiving low-temperature tempering treatment, it needed to be observed continuously for 24 hours. Although extremely busy, he maintained his regular shift and stayed up all night. Early on the second day he dragged his weary body to a valve factory to observe the installation of measuring and testing instruments. After completing over 1,000 mobile experiments, he plunged with total absorbtion into the comprehensive treatment of and theoretical inquiry into the test data. On several occasions he also went to Qinghua University, where he requested instruction from its mechanics professors. He then further improved his design.

Not only is the sealing capacity of this newly developed pneumatic ball valve good, the valve is also easy to manufacture and low in cost. It won an award at a scientific and technical conference held by the armed services. However, Zhao Chang'an had not yet "handed in his examination papers." When he saw in a foreign document a more advanced sealing ring, it immediately drew his attention. But the document did not contain specific data and details so he had to put in a great deal of effort, after which he quickly drew up a new blueprint and, with the help of master workers at a factory, made a model of the sealing ring. Preliminary tests have proved that he has obtained outstanding results.

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MILITARY AND PUBLIC SECURITY

ARTILLERYMEN GUIDED IN STUDY OF SCIENTIFIC TOPICS

Beijing JIEFANGJUN BAO in Chinese 20 Jun 79 p 2

[Article by special staff correspondent Shi Jinyu [2457 6855 3768]: "Artillery Company Arranges Content of Scientific Studies According to Its Specialities"]

[Text] An artillery company of Unit 84827 has organically integrated its study of science with its military training, and has both raised its level of scientific studies and promoted its military training.

In combining good study of science and culture with good military training, this company paid attention to two points: (1) Integrate the study of science and culture with knowledge about weaponry. The mortar platoon, while studying the structure of every part of a mortar, studied the pertinent sections of a middle-school physics course in order to clarify these questions: What is pressure? What is pressure intensity? And what is the relationship between pressure and pressure intensity? From this the platoon understood the principles of firing a mortar and the dispersion of its recoil. During its firing and training in the past, the platoon had not paid sufficient attention to the role of the mortar's base plate and, therefore, the pit into which the base plate was fitted was not firm, which frequently affected the target hit rate. After studying pressure and pressure intensity, the platoon understood the principle: during the firing of a mortar, the base plate not only absorbs the recoil when a shell is fired but also distributes the recoil uniformly, so that the area receiving the recoil is increased and the pressure intensity is lessened, with the result that the firing angle is stable and the target hit rate is high. Thus, the platoon improved its training methods and requirements. In combination with the principle of the 82-mm recoilless rifle, the company studied the law of Equilibrium Between Two Forces, which states that if the thrust and counterthrust of two forces are in equilibrium then the pressure point equals zero, further clarifying their understanding of the structural principles and combat performance of the 82-mm recoilless rifle. (2) Focusing on difficult training problems, they arrived at additional solutions during their study of science. The antiaircraft machinegun platoon was concerned about the fact that it did not have a way of premeasuring the distance to a directly aimed target. Using the principle of triangulation, the instructors first of all clearly explained the relationship between the line of fire and the line of sight, and then made a concrete analysis of the structure and function of the sighting device as well as of the differences between an antiaircraft machine-gun and a rifle, thereby clearing up misunderstandings, giving the soldiers a good

idea of their weapon, and making the training interesting and varied. In firing live ammunition into the sky, three squads hit their target balloons, obtaining good results. The party branch of this company has attached importance to the application of scientific knowledge in training, and company commander He [6320] has on many occasions summed up and disseminated widely the experiences of model squads. In the first quarter-year military examination, the company attained the level of good or better in all topics of all specialities.

The equipment of this company is comparatively complex, and it has five different main specialities. Owing to the differences in each speciality and each one's emphasis, the company makes different demands with regard to scientific education. Focusing on this feature, the party branch strengthened its leadership, paid attention to separating and combining, and, according to the special features of the specialities, formed 13 study groups and separately arranged their study content. The reconnaissance and command squad stressed the study of trigonometric functions and geometry; the vehicle squad stressed the study of the part of physics dealing with mechanics; and the artillery platoon and antiaircraft machinegun platoon, taking the raising of their speed in marking and refitting as the basis, stressed the study of mathematics. The company, based on changes in training content, has also continually rearranged and readjusted the study content. Everybody has become aware of the benefits of this kind of study for the promotion of military training and for the strengthening of its purposefulness and results. Since the beginning of this year, the company has taken four tests on scientific knowledge, scoring an average of 80 or higher. Political instructor Zhang [1728] scored an average of 90 or higher, and on two of the tests he scored 100.

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MILITARY AND PUBLIC SECURITY

GOOD COORDINATION OF TANK, INFANTRY UNITS OUTLINED

Beijing JIEFANGJUN BAO in Chinese 20 Jun 79 p 3

[Article by Wei Li [1218 0500] in "Combined Arms Forces Commander--Organization" column: "Dialogue on Infantry and Tanks"]

[Text] Editor's note: Following the continual application of modern science and technology to military units and equipment, the establishment and training of armed forces, as well as their combat, have also continually been transformed. This is the common trend in the armed forces of various countries. In 1975, Comrade Deng Xiaoping said: "To be a company commander now is different from being a company commander in the past. A company commander in the past just had to brandish his Mauser pistol and yell 'Charge!' Now it is not so easy and it is not the same as in the past. Many more demands are placed on a company commander's knowledge than there were in the past. Once war breaks out and several tanks or an artillery company are attached to your company, how will you command them?" This will be the situation for a company commander, and for commanders of combined arms forces at all levels.

In order to help the combined arms forces commanders to understand and become familiar with the technical and tactical characteristics of the various service arms and to improve their skills in organization and coordination of training and operations, we have started this special column, to which we ask the comrades to pay due attention.

Infantry regimental commander (shortened to "regimental commander" below): During this war of self-defensive counterattack, the higher level attached a tank battalion to our infantry regiment for our main line of attack, and this solved big problems for us.

Service arms advisor (shortened to "advisor" below): Oh! Please explain.

Regimental Commander: When our 3d Battalion was storming and capturing Hill 459, fire from the enemy concealed a grotto pinned it down and its assault was temporarily blocked. Then several cannons on the tanks supporting our regiment's operation destroyed the grotto which enable the unit to quickly seize and occupy the hill....

Advisor: That was well done.

Regimental commander: However, this was the first time we had used tanks in combat and we don't have much experience in this respect. Can you give us a little briefing today on the use of tanks?

Advisor: Good! We can study together and learn from each other.

I will first briefly discuss the development of the tank. The tank is a weapon that combines the functions of the spear and the shield, and it first appeared in a big battle of World War I. When people saw this weapon on the English-German battlefield on the banks of the Somme River, they thought it was a monster! During World War II, the tank became the principal assault weapon in the armies, and the armored tanks developed into a separate service arm.

Our country's tank force was developed on an infantry foundation. It was born in the beginning stage of the war of liberation and, under the loving care of Chairman Mao and the Party Central Committee, it gradually was built into an armored force that possessed a definite scope for action.

That the armored force was able to develop rapidly was because of its characteristic of combining fire power, mobility, and armor protection and because it has strong assault power.

Regimental commander: Through the war of defensive counterattack against Vietnam, we have reached a further understanding of the position and role of the tank. Such being the case, does it have some weak points?

Advisor: That is a good question. Anything whatsoever is subject to the principle of "one divides into two." The weak points of a tank are that it presents a big target, its movement is easily restricted by terrain, and its material and technological requirements are complex. Modern warfare, especially on a battlefield where various new antitank weapons are widely used, has a definite effect on the battle movements of our tank units. Only by gaining a clear idea of its weak points and, during war, making a point of overcoming unfavorable aspects and unfavorable factors affecting it, can we better display its power in battle.

Regimental commander: What problems should we give attention to in order to correctly use tank units?

Advisor: Based on the characteristics of modern warfare, I think we should stress three questions: we must master the principle of concentrated employment of tank units (elements [fendui 0433 7130]), devoting much attention to their battle, logistics and technical safeguards; (2) we must correctly employ tanks according to the mission, enemy situation, terrain, and their tactical and technical functions; and (3) we must organize close coordination between the tank units and the other military (service) arms. These are the most fundamental demands.

Regimental commander: Will you discuss your specific view on each question?

Advisor: Very well, I'll take the first question. Based on Mao Zedong's military thought and the characteristics of an armored force, one important principle in

employing an armored force is: concentrate its employment in the main direction. This is not only true with regard to a campaign but also with regard to tactics. We should make a point in the employment of tank units (elements) attached to an infantry division or regiment not to move them in too many directions and not to break them up into too many scattered smaller units, and it is also unadvisable to switch their subordination frequently.

Regimental commander: Concentrated employment is correct, but in actual warfare it is often not easy to effect. Because tanks are so powerful, each infantry regiment and battalion hopes to obtain their support.

Adivsor: Yes, this is precisely the problem. It is understandable that infantry elements would have this state of mind, but to be a combined forces commander one must have in mind and correctly get a grip on the overall situation. An armored force acts as an important assault force; only if it is concentrated in the main direction and at important moments, forming a "fist," can it play its role as "armored cavalry." At the same time, the characteristics of the technical equipment of tanks also do not allow them to be too dispersed in mountainous regions or in terrain inconvenient for movement; if they are too dispersed, many difficulties that will not be easy to be overcome will be added with regard to communications and engineering and to logistics and technical support. Speaking of logistics and technical support, the historical experiences of various countries in employing armored forces in battle and the practice in the war of defensive counterattack repeatedly proved that whether there is a timely supply of POL and ammunition to tanks, as well as whether rush-repairs can be carried out, has a direct bearing on a tank unit's success or failure in battle. If the tank unit is dispersed, one tank and one tank there and tanks scattered in all quarters, this will cause many difficulties for logistics and technical support which will not be easy to overcome, and even cause the tank unit to lose its capability to sustain combat.

Regimental commander: Some of our basic-level commanders always hope to have a few tanks at the front to boost morale and courage. This kind of thinking often leads to their improper employment.

Advisor: That is correct. Now let me discuss the second question.

The second question is one of correctly employing tanks according to their mission, the enemy's situation, and the terrain and according to their tactical and technical functions. As the proverb says, fit the appetite to the dishes and the dress to the figure, i.e. adapt oneself to circumstances. Tanks and other weapons are the same in that they all have their own special functions. One should know like the palm of one's hand each one's general specifications, external measurements, weapon performance, traversing capacity, speed of movement, and maximum range. Different types of tanks have different functions. This means that if one gets a clear idea of them separately one by one, then one can use the military forces in just the right way. For example, some comrades only know that a tank cannon's directional angle is 360 degrees, and think that it can wipe out targets in any direction. Actually, this is not so, because a tank cannon is affected by its angle of pitch, it has a definite blind angle of fire, which is even greater in mountainous regions, where, if you want tanks to wipe out enemy firing points, you cannot employ them as you would infantry armed with satchel charges. Also, with the tank's limited traversing capacity, if, under ordinary conditions, this capacity is exceeded the tank will overturn, fall into a ditch, or get stuck in mud. Only under the premise

of respecting objective reality and objective laws and of giving full play to man's subjective activity can we better display the power of the weapons we have. To employ the weapons we have beyond their ability to perform will often lead to many unnecessary losses.

Regimental commander: Right. We have experiences and lessons with regard to this question.

Advisor: The third question to which we must pay attention is the organizing of good coordination. Of course, the two previous questions are also related to coordination, or we can say that they are the premises for effecting good coordination.

Once we understand the tank's function we can see that only if the armored forces closely coordinate with infantrymen, artillerymen, engineers, and airmen can they display their strong points, make up for their weak points, and fully develop their power in battle. I think the most fundamental thing for a combined arms force commander is to establish the idea of a combined arms force and get rid of the concept of a single service arm. If one doesn't think in terms of a combined arms force, one's organizational command will only extend to one service arm. Certainly, a tank unit must by its very nature understand other military (service) arms. The concept of coordinated operations must be firmly established in combined operations.

Regimental commander: In that case, when employing tank units, what things should be paid attention to in organizing coordination?

Advisor: First of all, the tank units (elements) must certainly be given explicit opportune moments, directions, and missions for employment. Under the premise of understanding the overall plan of the campaign or battle, each service arm taking part in the campaign or battle must really be clear about the methods and liaison signals for the mission command relationship and mutual support. Only when time and conditions permit should tank units survey the terrain and engage in explicit coordination. Moreover, when organizing infantry-tank coordination, the commander of a combined arms force must sincerely heed the rational suggestions of the armored force and, making up for his unfamiliarity with the situation of the tank units (elements) and the tenseness of the situation on the battlefield, consider the drawbacks in the coordination plan that he had not thought about.

At the same time, the principle of mobility and flexibility should be carried out in coordinated command, concentrating the tank units so that they act as the vanguard of the infantry army (division). When the tanks penetrate deeply into the enemy position, the infantry, artillerymen, and engineers following the tanks are to come under the unified organizational coordination and effective command of the tank commander. In this situation, it is necessary to have a powerful movement support unit, composed mainly of engineers, to move in front of the tanks and insure their smooth advance. In a certain sense, the condition of the route of advance is more important than the enemy's situation, and a combined arms force commander should pay full attention to this point when organizing coordination.

Regimental commander: I thank the veteran commander for giving me today this vivid and profound lesson.

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